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ABSTRACT

About 1900, James W. Ellsworth created the educational system of Ellsworth, Pennsylvania. His aim was to have the system serve a dual purpose: the societal uplift of foreign miners to make them better citizens and the improvement of the company's productive efficiency. Ellsworth's school offered traditional courses along with training in English and a crude form of manual training designed to increase future mining productivity and improve the life of the workers. The paternalistic manual training program prepared both boys and girls for what the businessman believed would be their future roles in the coal fields. Boys learned how to use company-provided tools, especially woodworking equipment. As they grew older, they studied mining skills. Girls learned cooking and sewing almost exclusively. When the Lackawanna Steel Company revived the old training courses after buying the company and the town from Ellsworth, it followed Ellsworth's original program while expanding and improving the curriculum to meet not only its needs but also those of its workers. The success of its program can be measured in terms of the expanded course offerings--particularly vocational education courses and first aid and safety training--and the increased enrollments of children as well as the enrollment of workers in after-work programs. The program was particularly successful in training mine foremen and fire bosses. While this educational system was clearly a device to shape and manipulate workers with the company attitude toward work and life, it also provided the residents an opportunity they might never have had to learn a vocational skill and progress toward a mainstream American life-style. (KC)

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SOCIETAL UPLIFT AND PRODUCTIVE EFFICIENCY: CORPORATE USE OF VOCATIONAL EDUCATION IN ELLSWORTH, PENNSYLVANIA, 1900-1915

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Societal Uplift and Productive Efficiency: Corporate Use of Vocational Education in Ellsworth, Pennsylvania, 1900-1915

Just prior to the Twentieth Century Americans reacted in a variety of ways to the new industrial way of life. Traditional institutions and employment as well as revered values seemed to wither as industry, which quickly dominated the nation, created a host of new problems such as urban disorder, conflict among the social classes, and increased immigration--all seemed to threaten the homogeneity and social structure of the country. Faced with the rapidly changing way of life, some Americans looked to education as the panacea. The schools could become moral agents, teaching children traditional values, the principles of hard work, self-reliance, habits of order and accuracy as well as prepare future generations for occupations in an industrial society. Education would become a vehicle to bridge the problems of this industrial movement while also improving society and promoting upward economic mobility. The manual training movement, which was grounded in this attitude and stressed the importance of handling tools and the acquisition of functional literacy, eventually evolved into a systematic vocational education program in the schools that emphasized occupational training rather than simply an ability to work with tools. At the same time the manual training movement began, American businessmen sought to increase their productive efficiency in order to be more competitive in the marketplace. Some progressive businessmen viewed vocational education as a means to acquire employees with practical skills; the business community encouraged and frequently promoted this emerging educational development.[1] This union of business and education to improve society and increase productive efficiency was clearly exhibited in the educational system of Ellsworth, a coal mining community in western Pennsylvania's

bituminous field. This paper will focus on this town's vocational education system and the two companies that developed it prior to the First World War.[2]

James W. Ellsworth created the coal-mining town of Ellsworth, Pennsylvania in 1898. He was an eighth-generation New England descendant, who was born and raised in northeastern Ohio but moved to Chicago shortly after the Civil War and worked in a coal mercantile firm until 1878. In that year he opened his own coal business--Ellsworth and Company--and sold the black fuel principally to the railroads that radiated from Chicago. He amassed a minor fortune within a short time and became a prominent coal distributor, earning the reputation of meeting the railroads' fuel demands promptly. In an effort to maximize profits and eliminate dependence on independent coal mining operations, Ellsworth expanded his enterprise vertically and prepared to open his own coal mines. In 1898 he bought about 13,000 acres of coal rights and some surface land along Pigeon Creek in eastern Washington County, Pennsylvania to begin his mining operation. In the winter of 1899 he ordered the construction of two mine shafts (two additional mines were added later and there were plans to eventually operate nine shafts simultaneously) and the town, which he named for himself, slowly took shape as workers migrated into the previously tranquil valley. As was often the case in the coal fields, most of these people were recent European immigrants--Russians, Poles, Italians, and Slovaks--with little command of the English language and coal mining skills. A Congressional commission investigating life in western Pennsylvania's bituminous coal fields found that more than three-fourths of the miners were foreign born, less than half could speak English and only a small percentage (three percent) worked in mines prior to their arrival in the United States.[3] Huge educational deficiencies had to

be overcome before James W. Ellsworth could profitably work the mines.

The rural and isolated nature of the new town compelled Ellsworth to become a community developer. He based his plan for a "Utopian" mining town partially on his good friend George Pullman's "model" industrial town of Pullman, Illinois, and partially on his own experiences as a Chicago South Park Commissioner as well as a director of the Worlds Columbian Exposition of 1893. Drawing heavily from these previous attempts to improve the urban environment, Ellsworth planned virtually every aspect of his town in meticulous detail. Houses were constructed of locally-produced brick and they were uniformly designed to accomodate one family comfortably. In an effort to stabilize the work force and attract what he considered a "good element" of miners to the town, rent payments could be applied toward the purchase price of these homes. Adequate spacing between all buildings gave the town a park-like atmosphere, while carefully plotted and paved streets enhanced the natural beauty of the community. A company store, hotel, and modern doctor's office provided services to mine employees at locally competitive prices and it was not mandatory for workers to use these company-owned facilities. Elsewhere, in the isolated Pennsylvania coal towns a company often offset losses in other areas of its mining community, such as housing construction, by requiring use of these services and demanding payment in company scrip. James W. Ellsworth chose to avoid this type of coercive behavior and hoped his model town would attract a good work force; however, the coal operator still sought to control the workers through other means, particularly education. Once the town's construction began, Ellsworth told a group of businessmen the purpose of the planned community: "The intention is to provide every benefit with which an employee can be supplied. On the other hand, the cost of producing coal must be

made as low as it can be made legitimately." Within this constraint, he furnished the workers with everything he thought they needed to live happy and comfortable lives, but should these services decrease company profits they would be eliminated. Ellsworth utilized paternalism to attract and keep a good work force and, according to the businessman, this fatherly attitude and the availability of good services at a fair price made his mining community a utopia for workers. From our perspective, it also provided a convenient vehicle for extending social and economic control over the miners.[4]

Ellsworth's paternalism dominated every aspect of the new town, but it was particularly exemplified in his educational system. Virtually all coal operators subsidized schools to maintain social stability within their communities, but many also believed that an intelligent and "Americanized" work force would reduce accidents caused by ignorance, increase coal production, and create bigger profits. Although Ellsworth was under no obligation to provide an education for town residents, in December 1900 he hired H.L. Hetherington to create a school and make what Ellsworth called "rough unkempt-looking [sic] foreigners" more presentable. Hetherington taught traditional courses such as reading, writing, and mathematics, but he placed a heavy emphasis on comprehending and speaking English because many of the school's initial fifty-six pupils had no functional knowledge of the language. The third-floor attic of the company office served as the school until 1911, when a large, two-story brick building modeled along the same architectural lines as the company office was constructed exclusively for education. Ellsworth planned to build "a fully equipped industrial school" for the town, but this never became a reality. Besides a traditional education for the students, Ellsworth also offered a crude form of manual training designed to increase future mining productivity and

improve the life of the workers.[5]

James W. Ellsworth's paternalistic manual training program prepared both boys and girls for what the businessman believed would be their future roles in the coal fields. Boys learned how to use company-provided tools. In the early stages this involved essentially wood-working equipment--saws, hammers, measuring devices, and chisels--as well as instructions in simple, basic carpentry techniques. As the boys grew older they studied rudimentary mining skills such as the use of pick and shovel, pit car loading, and the separation of coal from debris rock. This training, although crude and extremely fundamental, provided the boys with their first experience in mining coal and it adequately prepared them to follow their fathers into the mines and work almost immediately without any costly company training program. This training developed skills necessary to mine coal--skills their father's did not have when they began work in the mines--while also increasing earnings, since miners were paid by the amount of coal each man produced. Girls also learned skills for their future as coal miners' wives; cooking and sewing were stressed almost exclusively. Because the children's families were required to provide all of the necessary materials for these classes, this training was often sporadic. When, as frequently happened, there was no food to cook or cloth to sew, these classes were canceled. As the town grew around the mines, Ellsworth's school system expanded to provide six hundred children the opportunity of a formal education as well as fundamental manual training. Despite the significant increase in student enrollment, the company did not curtail any classes.[6]

The coal businessman took great pride in his school's accomplishments, which he perceived as social enlightenment and uplift of his workers. "I found that after the foreign miners had been moved in a very short time," Ellsworth observed, "and the children of a

proper age had been entered in school, they commenced to present a more favorable appearance." The school provided the impetus for this transformation. "It was astonishing what a change took place," the businessman noted in his memoirs, "for in nearly every case the association with neat children--they were all pretty much alike to begin with--would begin to tell in making them more presentable, and the children themselves, as well as their parents, would begin to show real ambition." These rapid changes served to further Ellsworth's paternalistic desire: "The fact that they were willing to help themselves and were interested gave me every inducement to do for them," making "it a joy," he exalted, "which many times over repaid the expenditure and effort of mine required to accomplish all these things." He added that "the response manifested by even the dullest-brained was encouraging to my efforts. Surely it was profitable ground to cultivate . . . ." Ellsworth's desire to improve the people's lives centered around education, clean and attractive surroundings, and proper company guidance. It was his method of providing community stability and also helping foreign miners and their families make the difficult transition to mainstream American lifestyles. While he was a strict businessman who was keenly interested in profits (coal production rose from 121,987 tons in 1901 to 1,300,604 tons in 1906),[7] it would seem that Ellsworth derived great pleasure from his paternalistic programs and their impact on the people. Although he was extremely proud of the educational system's success, Ellsworth made no significant modifications to meet changing needs in the coal fields; the schools remained oriented toward manual training, with its emphasis on the use of carpentry tools, and did not train children or adults in occupational or vocational education.[8]

In early 1907 James W. Ellsworth sold the entire mining operation to the Lackawanna Steel Company. He cited the instability of

President Theodore Roosevelt's administration as his reason for selling out, but he actually wanted to retire to a quiet life in northeastern Ohio. Although the Lackawanna Steel Company stated it would continue many of Ellsworth's paternalistic policies, the economic "Panic of 1907" forced it to reduce significantly or abandon most of the town's services. Among the first programs curtailed was manual training. Not until 1911, four years after it bought the town, did the steel company reinstate this program; and this new system incorporated features of the emerging vocational education movement rather than Ellsworth's antiquated manual training notions.[9]

In 1911 the Lackawanna Steel Company implemented a vocational education program that not only trained children for future occupations but also "afforded employees an opportunity for self-improvement." They were the first such school system in Washington County to operate this innovative program and soon other schools would emulate or adopt these ideas.[10] Starting in the fifth grade, boys took traditional course work, but they could also take fundamental classes in first aid, elementary mining, business forms, and bookkeeping. The company said it offered these innovative courses "to better adapt the educational system to the needs of the community," which, from the perspective of the company, also meant training a future work force for occupations in the mines or company office. Although the new programs were considered important in training future company employees in mining techniques and office-related work, the course in first aid was deemed essential because of the numerous accidents in the coal industry. The Lackawanna Steel Company held the common belief that an intelligent work force trained in first aid, besides improving production, would help minimize the loss of life in mine mishaps. First aid training courses were based on this principle. In first aid classes,

instructors surveyed different types of injuries, particularly those that might occur in the mines, and suitable forms of medical aid required in particular situations. The level of instruction increased through the grades and it was thought that when a child left school he or she would have an excellent foundation in first aid. Similar after school classes were available to miners and their wives; and the company strongly urged participation. The women learned first aid to prepare themselves in case their assistance was required in a major mining accident. These initial first aid classes culminated in the annual June "First Aid Meet and Mine Rescue Demonstration," when teams of men and boys (the women apparently did not participate) solved special first aid problems in judged contests. This all-day event gave the company an opportunity to stress the necessity of safety while also demonstrating their concern for the workers through the teaching of first aid skills.[11]

The steel company expanded James W. Ellsworth's original homemaking training for girls to include a Domestic Science program. Lackawanna officials observed that many of "our girls are forced to leave school in order to assist their mothers in the homes," so they designed a "Domestic Science" department to provide "special training" to "better prepare them for their duties in the home at the present and in the future." The company bought kitchen "equipment that was plain but serviceable and such as the children will likely to use when they leave school." In other words, students learned to cook on old stoves that were similar to ones in their homes; stoves that could be cheaply purchased by the company. To learn and develop homemaking techniques, the girls' training included such practical tasks as: cooking, baking, canning, washing, ironing, and probably the most important, caring for the stove. On several occasions Lackawanna officials created a class to teach boys Domestic Science, but students

failed to attend because they "did not see the necessity." The company hoped to persuade boys that such training would be helpful, but they remained steadfast in their belief that such tasks were "woman's work" and refused to participate.[12]

In addition to expanding Ellsworth's vocational education system, the new town owners added two programs in 1912, one for pre-schoolers and the other for employees. The company created a kindergarten class to familiarize "a great number of foreign children who could not speak a word of the English" with the language. They hoped that a process of "well-directed play and conversation" would improve their linguistic skills so they could enter school without "any hindering language handicaps." The other new company program was the introduction of a "night or continuation school." The steel firm said they created this educational system to develop a desire for "self-improvement . . . covering what we believe to be their needs." This original night school consisted essentially of two classes: one in mining and the other in English. The company hoped that the mining class would prepare miners to take and pass the Pennsylvania State Examination for the positions of mine foreman and fire boss--positions that would increase the miner's pay and also give the company more experienced workers. A local mining engineer was brought to Ellsworth to teach the course two nights a week to the ten-member class. The company noted that the "class is very enthusiastic" and that its members have a "spirit even greater earnestness then when they attended school years ago." The classes in English gave the foreign miners a better understanding of the language, and also helped uplift and prepare those "who," the company said, "desire eventually to become naturalized citizens." In 1913, twenty-two men went to Pittsburgh, Pennsylvania to obtain naturalization papers and this number rose to over sixty in 1915.[13] The program was apparently

working, although its success rate in terms of those who achieved citizenship status is unknown.

The enrollment in these initial vocational education courses was low, but as the practicality and importance of the courses became apparent to the miners, attendance grew rapidly. The night course to prepare miners for the state examination grew from ten pupils in 1912 to an average of twenty-five students over the next three years. The class in English mushroomed from the initial size of five to nearly forty pupils in 1915. Enrollment in the student vocational education classes also grew rapidly. In the annual company report on schools, one official commented that these courses were "becoming more popular each year," despite the fact that students took these courses during recess so that they would not interfere with their normal classes![14] The sudden popularity of these vocational courses prompted the steel company to continue the educational program which they believed improved workers' lives and increased efficiency in coal production. The Lackawanna Steel Company sought to improve the quality of education in already existing courses while also expanding technical training and vocational education course offerings.

The year after the steel company began its vocational education system, Lackawanna officials created courses in occupational training. None of the initial courses were discontinued. Manual training for boys, which originally involved developing skills with wood-working tools and carpentry skills, now encompassed simple furniture construction. The company continued to provide tools and wood (mostly from old dynamite and equipment boxes) for the construction of such objects as stools, chests, writing desks, and toothbrush holders. Boys were also employed for the first time on the company farm helping raise chickens and dairy cows. Newly established school gardens enabled the boys to develop a knowledge of basic gardening. The

company started the gardens because it thought that the school could teach improved gardening methods to the children, who in turn would pass this information on to their parents, many of whom maintained gardens to supplement their food supply. Lackawanna officials also expanded girls' vocational training, particularly stressing the development of cooking skills. Girls in Domestic Science courses began to cook for large numbers of people. They helped prepare lunch for the entire town (now some 2000 people)[15] at the annual Mine Safety and Rescue Demonstration as well as at other smaller community meetings. As part of their educational program, they prepared a particular dish with the aid of a recipe book and were graded on its taste. Senior girls in the Domestic Science program prepared and served a meal to the local School Board. As a new part of the education process, the company encouraged students to save their money in the town bank, hoping this activity would develop thrift among the children and this trait would spread to their parents. In 1913 there were 350 student accounts totaling over $2,250.[16]

The night school was also expanded in 1913 to meet both the company's and the community's needs. The company observed that "the ambitious foreign speaking employees are beginning to realize that their advancement depends upon their ability to understand, to read, and to write English" and so the steel firm expanded its night school English courses. At the conclusion of these courses, which not only taught English but good citizenship as well, the company assisted graduates in procuring their citizenship papers.[17]

The night school mining class curriculum expanded and its enrollment greatly increased. Several new courses were added to help increase the practical and technical knowledge of the workers. Applied mathematics, stenography and mechanical drawing prepared skilled employees for work in the company office. A new class in

basic chemistry examined the formation of volatile gases found in the mines and methods to measure their accumulation in order to limit potential explosiveness. A course in "shop-work" trained men in the basic skills required to maintain and repair mining equipment.[18] The company hired a special mining engineer to teach various technical aspects of mining--mine gases, ventilation, blasting and haulage--and he followed a rigid course outline to provide instruction in all the essential areas. This instructor also introduced new mining techniques to insure that each of the miners was familiar with the latest technological developments before they took the state mining examination. The company boasted that its courses were extremely beneficial in preparing miners for the exam.[19] In 1915, thirty-two area candidates took the mine foreman test and the four men who passed the examination all had previously taken the Ellsworth mining classes. Four of the nine area men who passed the fire boss test had enrolled in the Lackawanna Steel Company's mining classes. The company said that it cost them approximately eighteen dollars per man to conduct these mining classes, but for those miners who took the course and passed the examination, their annual wages increased an average of two hundred sixty-six dollars.[20] The education program also may have given the miners a sense of loyalty to the company and Ellsworth and, with their pay increases, these skilled workers were more likely to remain in the town helping stabilize the work force.

In addition to these curriculum changes, the company also expanded the night school for women. The town women received little formal education, and often that was insufficient because of frequent absenteeism. Helping around the home and performing daily household chores usually preceded the school day. When the women requested that they should also receive vocational training similar to the men's, the company created a series of courses designed to make them better

citizens and wives. In 1913, a class in English was held for the first time solely for Ellsworth women; however, attendance was sporadic because of their household duties. The company established a night class in the Domestic Sciences for women because they wanted to learn what their husbands called "American cooking." It also created several courses in sewing where each woman worked on her family's clothes under the supervision of an instructor. The only negative aspect of these sewing courses, which at one point enrolled nearly three hundred women, was that "when the women finished their family sewing," company officials noted, "they usually do not come back to the class until such a time as that they may need more family sewing."[21] The inclusion of women in the vocational education process suggests the company's desire to not only uplift the lives of the men, but those of the women as well.

The company continued to offer a series of courses in first aid to the children, miners and women after the initial introduction of the classes in 1912. These courses were essentially the same, but they were now Red Cross approved and this standard permitted those who passed a particular unit of the instruction to receive Red Cross certification. School superintendent E.E. Bach was so delighted with the success of the Ellsworth first aid program that he discussed it with all the county teachers in their yearly meeting and even demonstrated some basic first aid procedures in the hopes that other schools might adopt their ideas.[22] As state mining regulations required the company to obtain more sophisticated mine safety equipment, the level of first aid instruction also increased while more town residents were introduced to techniques of first aid. The number of miners in these courses increased from the original 1912 class of one hundred and four to well over three hundred participants in 1915. Company officials continued to stress safety in their

concern for miners (and the entire coal mine), but also because of the new state workman's compensation laws, which required medical and safety training for the workers. The steel firm could also obtain large discounts from insurance companies because of their emphasis on first aid.[23]

The steel firm increased its private vocational education course offerings and its enrollment grew until the State of Pennsylvania began to take control of the town schools. Starting in 1915, the Vocational Department of the State Department of Public Instruction established organizational requirements that modified the Ellsworth vocational education system. In an effort to promote vocational education and subsidize the teachers' income, the State began paying two-thirds of the night school teachers' salaries as well as those who taught classes "which have a direct bearing upon the occupation of the students."[24] The company's private educational system, which it had controlled for its own benefit as well as improving the lot of its workers, had come to an end. Hereafter, the State of Pennsylvania took a more active role in the school's operation, although the company remained influential in shaping its curriculum.

James W. Ellsworth created the educational system of Ellsworth, Pennsylvania to serve a dual purpose: the societal uplift of foreign miners to make them better citizens, and to improve the company's productive efficiency. The coal businessman was extremely satisfied with the results of his school, particularly the improvement of workers' appearance and lives. When the Lackawanna Steel Company revived the old training courses, it followed Ellsworth's original program while expanding and improving the curriculum to meet not only its needs but those of its workers. The success of its program can be measured in terms of the expanded course offerings and the increased enrollments as well as the enrollment of workers. The company

increased its coal production during these years but this was probably more because of the adaptation of machines and additional markets than the vocational education courses. While this educational system was clearly a device to shape and manipulate workers with the company attitude toward work and life, it also provided the residents an opportunity they might never get to learn a vocational skill and progress toward a mainstream American lifestyle. In meeting the dual goals of efficiency and uplift, the Ellsworth vocational education system was a success.

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FOOTNOTES

[1]There have been a number of works on the evolution of vocational education in the United States: Lawrence Cremin, The Transformation of the School (New York 1961); Henry Perkinson, The Imperfect Panacea: American Faith in Education, 1865-1965 (New York 1968); Marvin Lazerson and W. Norton Grubb, American Education and Vocationalism: A Documentary History, 1870-1970 (New York 1974); Paul Douglas, American Apprenticeship and Industrial Education (New York 1921); Berenice M. Fisher, Industrial Education: American Ideals and Institutions (Madison, Wisconsin 1967); Raymond Callahan, Education and the Cult of Efficiency (Chicago 1962); Sol Cohen, "The Industrial Education Movement, 1906-1917," American Quarterly 20 (1968); Melvin Barlow, History of Industrial Education in the United States (Peoria, Illinois); Layton Hawkins, Charles Prosser, and John C. Wright, Development of Vocational Education (Chicago 1951); and Charles A. Bennett, History of Manual and Industrial Education, 1870 to 1917 (Peoria, Illinois). Businessmen and their role in this drive for efficiency has been examined in a number of works as well: Samuel Haber, Efficiency and Uplift: Scientific Management in the Progressive Era, 1890-1920 (Chicago 1964); Samuel P. Hays, Response to Industrialism, 1885-1914 (New York 1957); Edward C. Kirkland, Industry Comes of Age (Chicago 1967); Robert Weibe, Businessmen and Reform: A Study of the Progressive Movement (Cambridge, Mass. 1962); Jerry Israel, ed., Building the Organizational Society (New York 1972) contains several essays related to this topic; and William Graebner, "Great Expectations: The Search for Order in Bituminous Coal, 1890-1917," Business History Review 48 (1974) examines the move toward efficiency in the soft coal industry.

[2]Vocational education prior to the First World War had just emerged from the manual training movement and was becoming part of the traditional educational system. For more information on the manual training and vocational education movement before national legislation see: Melvin Barlow, History of Industrial Education in the United States (Peoria, Illinois), 30-91; Layton Hawkins, Charles Prosser and John C. Wright, Development of Vocational Education (Chicago 1951), 1-74; Charles A. Bennett, History of Manual and Industrial Education, 1870 to 1917 (Peoria, Illinois); and Raymond Callahan in Education and the Cult of Efficiency (Chicago 1962) examines the application of business efficiency to educational administration.

[3]James W. Ellsworth, The Ellsworth Family, I: James W. Ellsworth: His Life and Ancestry (New York 1931), 3, 9, 13-14, 16; Lakeside Annual Directory of the City of Chicago, 1878-79 (Chicago 1879), 363; "1877 Business Card," James W. Ellsworth Papers, Box I, Folder 1, Western Reserve Academy Library Archives, Hudson, Ohio; "Bentleyville News," Monongahela Valley Republican, 16 February 1899 (hereafter cited as MVR); "Bentleyville Boom," Washington, Pa., Reporter 11 January 1899 (hereafter cited as WR); U.S., Washington, Pennsylvania, Washington County Courthouse, Deed Book, vol. 226, pp. 1-65, John Simpson to James W. Ellsworth, 6 July 1899; "Ellsworth, Model Mining Settlement," Washington Observer, 10 June 1903 (hereafter cited as WO); "Conditions of Life in Bituminous Mines," WR, 8 August 1910; U.S., Reports of the Immigration Commission: Immigrants in Industries, vol. 6: part 1: Bituminous Coal Mining (Washington: Government Printing Office, 1911), 266, 272, 465.

[4]Ellsworth served on Chicago's South Park Commission for nine years (1889-1898) and was president for several years. He was instrumental in helping improve and shape Chicago's park system. He was also one of the forty-five directors of the World's Columbian Exposition of 1893 and personally brought landscape artist Daniel Burnham to Chicago to help create the fair grounds. The National Cyclopedia of American Biography, s.v. "James W. Ellsworth"; Ellsworth, Life and Ancestry, 37-40; "New Coal Field Opened," Pittsburgh Times, 9 May 1900; "Ellsworth, Model Mining Settlement," WO, 10 June 1903; "A New Coal Mining Town," The New York Times, 16 September 1899; "Ellsworth to Be Model Town on Pigeon Run," Pittsburgh Dispatch, 15 September 1899. This attitude will change as trouble in the mines pushed Ellsworth toward a more traditional coal operator viewpoint of complete social and economic control over the miners. For more on this development see:

Raymond M. Hyser, "Discord in Utopia: The Ellsworth Strike of 1904," The Pennsylvania Magazine of History and Biography 106 (July 1982).

[5]David Alan Corbin, Life, Work and Rebellion in the Coal Fields: The Southern West Virginia Miners, 1880-1922 (Urbana, Illinois 1981), 127-130; "Lower Somerset," WR, 10 December 1900; "New School Buildings," WR, 16 April 1911; "Night School at Ellsworth," WR, 19 April 1911.

[6]"Industrial Schools for Ellsworth," MVR, 9 May 1901; "Ellsworth, Model Mining Settlement," WO, 10 June 1903; Ellsworth, Life and Ancestry, 32.

[7]U.S., Washington, Pennsylvania, Washington County Courthouse, Mortgage Book, vol. 88, p. 434, Ellsworth Coal Company to Union Trust Company, 15 November 1904; "Annual Report of Inspector Louttit," WO, 16 February 1907.

[8]Ellsworth, Life and Ancestry, 32.

[9]Ellsworth, Life and Ancestry, 32; James W. Ellsworth to F.A. Coleman, 16 September 1916, James W. Ellsworth Papers, Box II, Folder 10, Western Reserve Academy Library Archives, Hudson, Ohio; "Night School at Ellsworth," WR, 19 April 1911.

[10]The Washington County School Board in 1912, after considerable debate, voted to include Domestic Science and manual training in their curriculum while also appropriating $3000 to purchase needed equipment. "Course to Include Domestic Science," WR, 2 August 1911; "School Board Favors Manual Training," WR, 14 June 1912; "Board Votes for Mamual Training in Local Schools," WR 12 July 1912.

[11]"First Annual Sociological Report, Ellsworth Collieries Company, 1912," p. 8, Ellsworth, Pennsylvania (hereafter cited as "First Report, 1912"); "Course to Include Domestic Science," WR, 2 August 1911; "School Board Favors Manual Training," WR, 14 June 1912; "Board Votes for Manual Training in Local Schools," WR 12 July 1912.

[12]"First Report, 1912," p. 14.

[13]"First Report, 1912," p. 22.

[14]"Second Annual Sociological Report, Ellsworth Collieries Company, 1913," (hereafter cited as "Second Report, 1913"); "Third Annual Sociological Report, Ellsworth Collieries Company, 1914," (hereafter cited as "Third Report, 1914"); "Fourth Annual Sociological Report, Ellsworth Collieries Company, 1915," (hereafter cited as "Fourth Report, 1915").

[15]"Population of the County's Boroughs," WR, 20 February 1911.

[16]"Second Report, 1913," p. 40; "Third Report, 1914," p. 16; "Fourth Report, 1915," pp. 11-12.

[17]"Second Report, 1913," p. 43.

[18]"Second Report, 1913," p. 44; "Third Report, 1914," p. 16; "Fourth Report, 1915," pp. 11-12.

[19]"Second Report, 1913," pp. 41-43.

[20]"Fourth Report, 1915," p. 12; "Second Report, 1913," p. 43.

[21]"Third Report, 1914," pp. 16, 13; "Fourth Report, 1915," pp. 10-11.

[22]"Teachers Show Great Interest," WR, 23 August 1912.

[23]"Fourth Report. 1915," p. 13.

[24]"Fourth Report, 1915," pp. 12-13.